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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Ewald Schneider

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EXAMINER

LEE, DORIS L

ART UNIT

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/574,721	Applicant(s) SCHNEIDER, EWALD	
	Examiner Doris L. Lee	Art Unit 4145	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 1-10 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 11-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>20060405</u> . | 6) <input type="checkbox"/> Other: ____. |

Claim Objections

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. **Claims 12-18** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 12, it recites the limitation "the flameproofing agent".

There is insufficient antecedent basis for this limitation in the claim. For the purpose of this office action, claim 12 is interpreted to be depended on claim 11. Appropriate correction is required.

Regarding claims 13, 14, and 16-18, they recite the limitation "and/or".

This renders the claims indefinite. Appropriate correction is required.

Regarding claims 14-16, they recite the limitation "if necessary". This renders the claims indefinite because the claims do not detail when the limitations which follow "if necessary" are necessary. Appropriate correction is required.

Double Patenting

3. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed.

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Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

4. **Claims 11,12, 14-19** are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 3-5, 7, 9, and 11-12 of copending Application No. 10/553,259 in view of Sugino et al (US 5,895,607). Both the instant application and the copending application '542 recite a polyamide composition composed of a partly aromatic polyamine with the same flame retardant material and fillers. However, '542 does not recite the addition of an aliphatic polyamide composition.

Sugino teaches a flame retardant polyamide material with a filler (C5/L44-C6/L10) that has a blend of aliphatic and partly aromatic polyamides (C3/L10-16). Sugino also teaches that the addition of the aliphatic polyamide can improve the impact resistance of the polyamide material (C3/L44-46).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to add the aliphatic polyamide of Sugino to the composition recited in '542. One would have been motivated to do so in order to receive the expected benefit of improving impact resistance (Sugino, C3/L44-46). They are

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combinable because they are concerned with the same field of endeavor, namely flameproof polyamides and would have a reasonable expectation of success.

This is a provisional obviousness-type double patenting rejection.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. **Claims 11-15 and 17-20** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Sugino et al (US 5,895,607)** in view of **Kleiner et al (US 5,773,556)** in view of **Scheibelhoffer et al (US 5,122,569)**.

Regarding claim 11, Sugino teaches a flameproof (C5/L64-C6/L4) polyamide molding compound (Abstract), comprising

- 20 - 80% by weight of one or more aliphatic polyamides (C6/Example 1, nylon 6, aliphatic polyamide: 34.7%);
- 1 - 40% by weight of one or more partly aromatic polyamides (C6/Example 1, semi-aromatic nylon: 34.7%);
- 5 - 60% by weight of a fiber- or particle-like filler or mixtures thereof (C6/Example 1, carbon fiber 30.5%);
- an additional additive (C6/L4-10, such as a colorant).

Example 1 of Sugino does not explicitly teach the addition of 1 - 18% by weight of a flameproofing agent. Sugino also does not teach the use of

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phosphinic acid salt or diphosphinic acid salt as the flame retardant, although Sugino does state that any known flame retardant may be used (C5/L50). Sugino also does not teach the addition of 0.05-10% by weight of additional additive.

Sugino does teach that a flame retardant can be added to the composition (C5/L64-66, 2-10%). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to add the flame retardant of Sugino into the composition given in Example 1 of Sugino in order to make it flameproof. Absent objective evidence to the contrary, there would have been a reasonable expectation of success.

Kleiner teaches a flameproof polyamide molding compound (Abstract) comprising a phosphinic acid salt and/or a diphosphinic acid salt (C1/L40-C2/L36) of the formula as recited in the instant claim. Kleiner teaches that this flame retardant material is added to the polymer, in general 5-35% by weight based on the weight of the polymer (C3/L4-6). Kleiner also teaches that the phosphinic acid salts are thermally stable, do not decompose the polymers during processing and do not affect the process of producing the polyamide molding material (C3/L18-22).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the phosphinic acid salt and/or diphosphinic acid salt flame retardant of Kleiner in the polyamide molding material of modified Sugino. One would have been motivated to do so in order to receive the expected benefit of having a thermally stable flame retardant which does not affect the processing of the polyamide (Kleiner, C3/L18-22). They are combinable because they are

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concerned with the same field of endeavor, namely flameproof polyamides.

Absent objective evidence to the contrary, there would have been a reasonable expectation of success.

Scheibelhoffer teaches a polyamide composition (Abstract) which is modified by one or more conventional additives (C8/L67-68) such as a colorant up to 5% (C9/L45-48).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use up to 5% colorant as disclosed in Scheibelhoffer to the polyamide composition of modified Sugino. One would do so to receive the expected benefit of having a colored polyamide composition. They are combinable because they are concerned with the same field of endeavor, namely polyamide compounds. Absent objective evidence to the contrary and based upon the teachings of the prior art, there would have been a reasonable expectation of success.

Regarding claim 12, modified Sugino discloses all the limitations as set forth above. In addition, Sugino teaches that the flame retardant is added from 2-10% by weight (C5/L65).

Sugino does not explicitly teach that the polyamide compound comprises from 5-15% by weight of the flameproofing agent.

It would have been obvious to one of ordinary skill in the art at the time of invention to have selected the overlapping portion of the ranges disclosed by the reference because overlapping ranges have been held to be a prima facie case of obviousness. *In re Malagari*, 182 USPQ 549.

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Regarding claim 13, modified Sugino discloses all the limitations as set forth above. In addition, modified Sugino teaches that the aliphatic polyamides are selected from the group formed by homo- and copolyamides, the periodical units of which are derived from aliphatic amines, aliphatic dicarboxylic acids and/or aliphatic amino carboxylic acids, the amino carboxylic acids also being able to be used in the form of their lactams (Sugino, C4/L19-33).

Regarding claim 14, modified Sugino discloses all the limitations as set forth above. In addition, modified Sugino teaches that the partly aromatic polyamides are selected from the group formed by polyamides, the periodical units of which are derived from at least one aromatic dicarboxylic acid, if necessary from one or more aliphatic dicarboxylic acids and from one or more aliphatic and/or cycloaliphatic diamines (Sugino, C4/L5-18).

Regarding claim 15, modified Sugino discloses all the limitations as set forth above. In addition, modified Sugino teaches that the partly aromatic polyamides are selected from the group consisting of polyamides, the periodical units of which are derived from at least one aliphatic dicarboxylic acid, if necessary from one or more aromatic dicarboxylic acids and p-xylylenediamine and/or m-xylylenediamine (Sugino, C4/L5-18).

Regarding claim 17, modified Sugino discloses all the limitations as set forth above. In addition, modified Sugino teaches that the phosphinic acid salt of formula (I) and/or the diphosphinic acid salt of formula (II) and/or polymers thereof, wherein M is calcium or aluminum ions (Kleiner, C2/L32), is used as flameproofing agent (Kleiner, C1/L35-39).

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Regarding claim 18, modified Sugino discloses all the limitations as set forth above. In addition, modified Sugino teaches that the additional additive is selected from the group consisting of **stabilizers**, processing aids, anti-dripping agents, **colorants and/or pigments** (Sugino, C6/L4-10).

Regarding claim 19, modified Sugino discloses all the limitations as set forth above. In addition, modified Sugino teaches a method of producing molded article (Sugino, C5/L60, injection molding) from the composition as recited in instant claim 11.

Regarding claim 20, modified Sugino discloses all the limitations as set forth above. In addition, modified Sugino teaches that the molded compound produced therefrom fulfills the requirement according to the inflammability classification V0 according to UL94 with a test piece thickness of maximum 0.8 mm (Sugino, C5/L60-64).

7. **Claim 16** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Sugino et al (US 5,895,607)** in view of **Kleiner et al (US 5,773,556)** in view of **Scheibelhoffer et al (US 5,122,569)** as applied to claim 11 above, further in view of **Moriwaki et al (US 6,075,116)**.

Regarding claim 16, modified Sugino discloses all the limitations as set forth above. In addition, modified Sugino teaches that the partly aromatic polyamides are selected from the group formed by polyamides, the periodical units of which are derived from adipic acid or sebacic acid (C4/L14) and if necessary adipinic acid and also hexamethylene diamine (Sugino, C4/L5-18).

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Modified Sugino states that the dicarboxylic acid used in the invention is not limited (C4/L8) however, modified Sugino does not explicitly teach a period unit which is derived from terephthalic acid and/or isophthalic acid.

Moriwaki teaches a polyamide composition (Abstract) which uses a partly aromatic polyamide as a component of the composition. Moriwaki teaches that the partly aromatic polyamide can include nylon MXD6, prepared from m-xylylenediamine and adipic acid or nylon 6T prepared from terephthalic acid and hexamethylenediamine.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to use the nylon 6T prepared from terephthalic acid and hexamethylenediamine of Moriwaki in the polyamide composition of modified Sugino because it would amount to nothing more than a use of a known partly aromatic polyamide for its intended use in a known environment to accomplish entirely expected result.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Doris L. Lee whose telephone number is (571)270-3872. The examiner can normally be reached on Mon - Thurs, 7:30am - 5pm EST and every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Basia Ridley can be reached on (571) 272-1453. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Gwendolyn Blackwell/
Primary Examiner, Art Unit 1794

DLL 4/16/2008